

IN THE SPECIFICATION:

Please replace paragraph [0040] on page 10, line 23 to page 11, line 28 of the specification with the following amended paragraph:

[0040] Referring now to Figure 2b, the temperature sensor signal 116 is divided by ~~250~~ the temperature bridge signal 118 at a divider 250 to provide a temperature ratio signal 252. Then an overheat factor 240 is applied to the temperature ratio signal 252 using a multiplier 242 and a temperature calibration/correction factor 262 is also applied using a multiplier 244 providing a temperature sensor' signal 246. While application of various correction factors throughout this application are shown using multipliers (or multiplication) those skilled in the art will also appreciate that dividers (or division) may also be used and still be within the scope of the invention. The overheat factor 240 is a predetermined constant that determines a difference in temperature of the temperature sensor RTD 232 and the flow sensor RTD 226. It should be noted that the application of the overheat factor 240 and the temperature calibration/correction factor 262 may be executed in any order and still be within the scope of the invention. An operational amplifier 248 is adapted to provide the bridge signal 120 so that both inputs, the flow ratio signal 253 and the temperature ratio' signal 246, to the operational amplifier 248 are made substantially equal. An optional low-pass filter 249 on the bridge signal 120 provides greater system stability. The temperature ratio 252 is a substantially linear function of the temperature of the fluid in the flow tube 224. A predefined function ($Y=F(X)$) 254 of the temperature ratio 252

provides a temperature correction factor 256 that is independent of the flow rate of the fluid in the flow tube 224. The predefined function 254 may be, for example, a linear, piece-wise linear, quadratic, cubic or any order of polynomial. Parameters of the predefined function 254 are determined using a method of calibrating the flowmeter 100 described herein below. A calibration mode switch 260 selects a temperature calibration factor 258 when the flowmeter 100 is in a calibration mode (switch position zero) or the temperature correction factor 256 when the flowmeter is in a normal operation mode (switch position 1, as shown in Fig. 2b).